Teacher's Scoring Guide

Grade 5
Science

Fall 2008

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Indiana Statewide Testing for Educational Progress

20940-W

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INTRODUCTION

During the fall of 2008, Indiana students in Grades 3 through 8 and Grade 10 participated in the administration of *ISTEP+*. The test for *ISTEP+* Fall 2008 consisted of a multiple-choice section and an applied skills section. For the fall testing, the multiple-choice section was machine-scored. The applied skills section, which consisted of open-ended questions, was hand-scored.

Test results for both the multiple-choice and applied skills sections as well as images of the applied skills student responses will be available online in late November 2008. *ISTEP+* Student Labels and Student Reports will be sent to the schools in early December 2008. It is the expectation of the Indiana Department of Education that schools will take this opportunity to invite students and parents to sit down with teachers to discuss the results. To support this endeavor, the Indiana Department of Education has prepared the following *Teacher's Scoring Guide*. The purpose of this guide is to help teachers to:

- understand the methods used to score the *ISTEP+* Fall 2008 applied skills section, and
- discuss and interpret these results with students and parents.

In order to use this guide effectively, you will also need the Student Report and a copy of the student's applied skills responses.

There are three scoring guides for Grade 5, English/Language Arts, Mathematics, and Science. In this Science guide, you will find:

- an introduction,
- a list of the Science Grade 4 Indiana Academic Standards,*
- rubrics (scoring rules) used to score the open-ended questions,
- anchor papers that are actual examples of student work (transcribed in this guide for clarity and ease of reading), and
- descriptions of the ways in which the response meets the rubric criteria for each of the score points.

When you review the contents of the scoring guide, keep in mind that this guide is an overview. If you have questions, write via e-mail (istep@doe.in.gov) or call the Indiana Department of Education at (317) 232-9050.

* Because *ISTEP+* is administered early in the fall, the Grade 5 Science assessment is based on the academic standards through Grade 4.

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INTRODUCTION TO THE SCIENCE APPLIED SKILLS SECTION

The applied skills section that students responded to this past fall in Grade 5 allowed the students to demonstrate their understanding of Science in a variety of ways, such as making observations, measuring with a ruler, completing a graph, analyzing data, or applying concepts.

STRUCTURE

The applied skills section for Grade 5 Science was given in Test 11, which consisted of eight open-ended questions.

SCORING

Each open-ended question was scored according to its own rubric. A rubric is a description of student performance that clearly articulates the requirements for each of the score points. Scoring rubrics are essential because they ensure that all papers are scored objectively. Each rubric for this administration of the *ISTEP+* Grade 5 Science assessment has a maximum possible score of two score points.

NOTE: Images of the questions and student work have been reduced to fit the format of this guide.

Rubrics are established prior to testing to describe the performance criteria for each score point. The performance criteria determine the number of score points possible for each question. This process ensures that all responses are judged objectively.

1. Students should not be penalized for:
   - spelling or grammar errors
   - using abbreviations; for example, *cm* or *centimeters* would be acceptable
2. Students should be given credit for:
   - answers not written on the answer line (however, in some cases, because a question may consist of different parts, placement of an answer on the answer line is necessary to determine to which part the student intended to respond)

CONDITION CODES

If a response is unscorable, it is assigned one of the following condition codes:

A Blank/No response/Refusal
B Illegible
C Written predominantly in a language other than English
D Insufficient response/Copied from text
E Response not related to test question or scoring rule

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SCIENCE GRADE 4
INDIANA ACADEMIC STANDARDS

- **The Nature of Science and Technology**
  Students, working collaboratively, carry out investigations. They observe and make accurate measurements, increase their use of tools and instruments, record data in journals, and communicate results through chart, graph, written, and verbal forms.

- **Scientific Thinking**
  Students use a variety of skills and techniques when attempting to answer questions and solve problems. They describe their observations accurately and clearly, using numbers, words, and sketches, and are able to communicate their thinking to others. They compare, explain, and justify both information and numerical functions.

- **The Physical Setting**
  Students continue to investigate changes of Earth and sky and begin to understand the composition and size of the universe. They explore, describe, and classify materials, motion, and energy.

- **The Living Environment**
  Students learn about an increasing variety of organisms—familiar, exotic, fossil, and microscopic. They use appropriate tools in identifying similarities and differences among them. They explore how organisms satisfy their needs in their environments.

- **The Mathematical World**
  Students apply mathematics in scientific contexts. Their geometric descriptions of objects are comprehensive. They realize that graphing demonstrates specific connections between data. They identify questions that can be answered by data distribution.

- **Common Themes**
  Students work with an increasing variety of systems and begin to modify parts in systems and models and notice the changes that result. They question why change occurs.

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Test 11—Question 1: The Physical Setting

1 Many changes occur in Indiana when the season changes from fall to winter.

Give ONE example of how the WEATHER in Indiana changes when the season changes from fall to winter.

_____

_____

Give ONE example of how some PLANTS in Indiana change when the season changes from fall to winter.

_____

_____

Give ONE example of how some ANIMALS in Indiana change when the season changes from fall to winter.

_____

_____

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Key Elements:

Any one of the following:

- temperatures get colder
- precipitation changes (e.g., snow and ice in winter)
- other valid example of how the weather changes when the season changes from fall to winter

NOTE: Do not accept references to length of day as correct answers.

AND

Any one of the following:

- leaves change color
- leaves fall from trees
- grass/other plants get brown/change color
- (annuals) freeze and die
- other valid example of how some plants change when the season changes from fall to winter

AND

Any one of the following:

- some animals hibernate
- some animals migrate
- some animals store food for winter
- the fur/feathers on some animals gets thicker
- the fur/feathers on some animals changes color to match winter environment
- other valid example of how some animals change when the season changes from fall to winter

Rubric:

2 points	Three key elements
1 point	One or two key elements
0 points	Other

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Test 11—Question 1
Score Point 2

This response correctly gives an example of how the weather changes, how some plants change, and how some animals change in Indiana when the season changes from fall to winter. The response receives a Score Point 2.

SCORE POINT 2

1 Many changes occur in Indiana when the season changes from fall to winter.

Give ONE example of how the WEATHER in Indiana changes when the season changes from fall to winter.

The weather gets colder in the winter and fall.

Give ONE example of how some PLANTS in Indiana change when the season changes from fall to winter.

The plants might die and never come back.

Give ONE example of how some ANIMALS in Indiana change when the season changes from fall to winter.

Some hibernate and some don't.

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SCORE POINT 1

1 Many changes occur in Indiana when the season changes from fall to winter.

Give ONE example of how the WEATHER in Indiana changes when the season changes from fall to winter.

The trees lose all there leves.

Give ONE example of how some PLANTS in Indiana change when the season changes from fall to winter.

The plats start to die away.

Give ONE example of how some ANIMALS in Indiana change when the season changes from fall to winter.

There fer will change.

Test 11—Question 1
Score Point 1

This response gives an incorrect example of how the weather changes in Indiana when the season changes from fall to winter. However, the student gives a correct example of how some plants change and how some animals change in Indiana when the season changes from fall to winter. Therefore, this response receives a Score Point 1.

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Test 11—Question 1
Score Point 0

This response gives no correct examples of how the weather changes, how some plants change, or how some animals change in Indiana when the season changes from fall to winter. Therefore, this response receives a Score Point 0.

SCORE POINT 0

1 Many changes occur in Indiana when the season changes from fall to winter.

Give ONE example of how the WEATHER in Indiana changes when the season changes from fall to winter.

The temperature gets higher or lower.

Give ONE example of how some PLANTS in Indiana change when the season changes from fall to winter.

Some of them die and some of them grow.

Give ONE example of how some ANIMALS in Indiana change when the season changes from fall to winter.

It doesn't really mater to them because there fur turns them hot or cold when needed.

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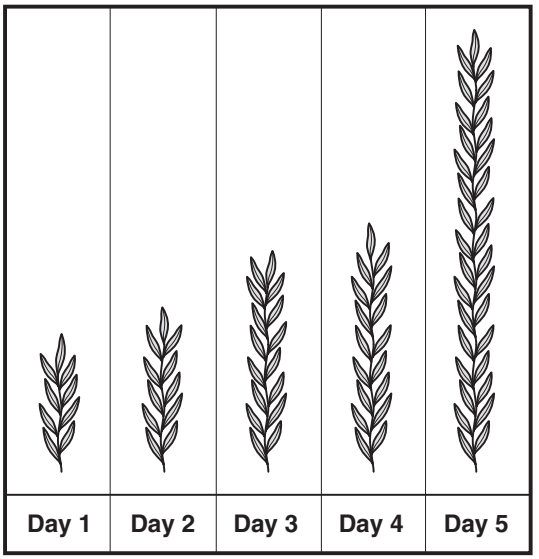
2 Use your ruler to answer this question.

A class is studying how water plants grow in an aquarium. The table below shows the height of the same plant over five days.

Height of Plant



Measure the height of the plant, in centimeters, on each day, and record your measurements in the table below.

Height of Plant

Day	Height (in centimeters)
1	
2	
3	
4	
5	

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Key Elements:

- Any measurements within the range listed for each cell:

Height of Plant

Day	Height (in centimeters)
1	2.0–3.0
2	2.5–3.5
3	3.5–4.5
4	4.0–5.0
5	7.5–8.5

NOTE: Although units of measurement are not required to be listed for this item, do not accept a measurement if non-metric units are listed (e.g., inches).

Rubric:

2 points Five measurements correct

1 point Three or four measurements correct

0 points Less than three measurements correct

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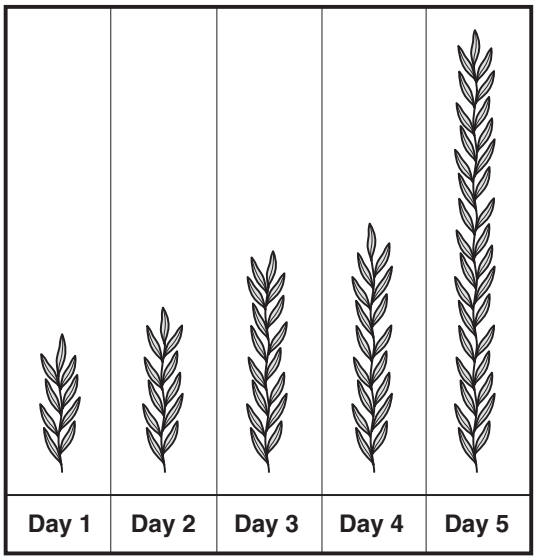
SCORE POINT 2

2 Use your ruler to answer this question.

A class is studying how water plants grow in an aquarium. The table below shows the height of the same plant over five days.

Height of Plant



Measure the height of the plant, in centimeters, on each day, and record your measurements in the table below.

Height of Plant

Day	Height (in centimeters)
1	2.5
2	3
3	4
4	4.5
5	8

Test 11—Question 2 Score Point 2

This response correctly lists measurements within the designated ranges for all five cells of the table. The response receives a Score Point 2.

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Test 11—Question 2
Score Point 1

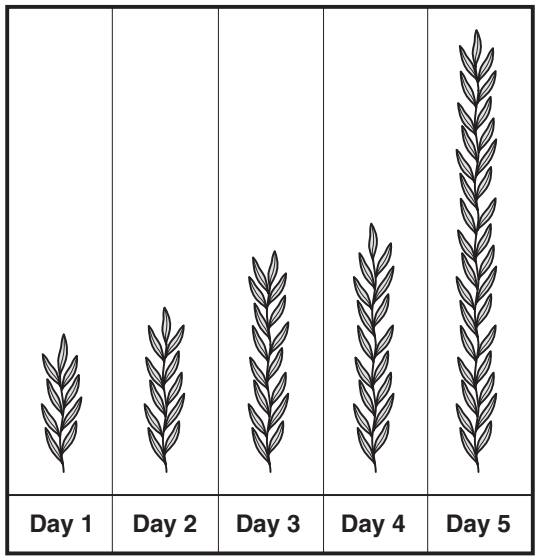
This response correctly lists measurements within the designated ranges for only three cells of the table. Therefore, this response receives a Score Point 1.

SCORE POINT 1

2 Use your ruler to answer this question.

A class is studying how water plants grow in an aquarium. The table below shows the height of the same plant over five days.

Height of Plant



Measure the height of the plant, in centimeters, on each day, and record your measurements in the table below.

Height of Plant

Day	Height (in centimeters)
1	2/5 cm
2	3 cm
3	4 cm
4	4/5 cm
5	8 cm

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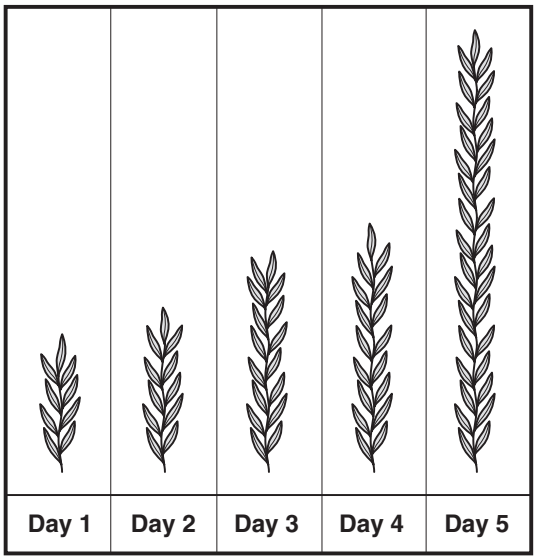
SCORE POINT 0

2 Use your ruler to answer this question.

A class is studying how water plants grow in an aquarium. The table below shows the height of the same plant over five days.

Height of Plant



Measure the height of the plant, in centimeters, on each day, and record your measurements in the table below.

Height of Plant

Day	Height (in centimeters)
1	$2\frac{1}{2}$ in
2	3 in
3	4 in
4	$4\frac{1}{2}$ in
5	8 in

Test 11—Question 2
Score Point 0

This response does not list any correct measurements because the student uses a non-metric unit to label the measurements. Therefore, this response receives a Score Point 0.

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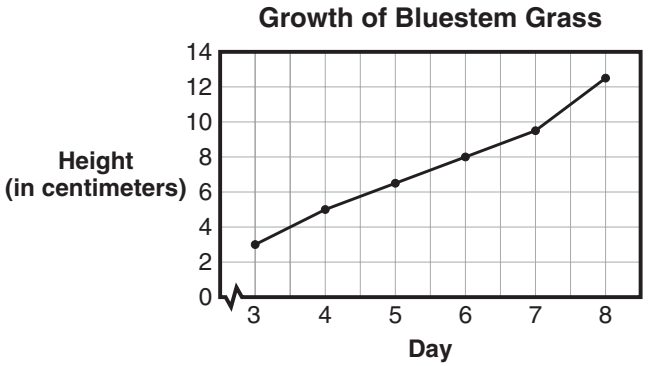
Test 11—Question 3: Scientific Thinking

3 The graph below shows the growth of bluestem grass.



How tall was the grass on Day 6?

Answer _____ centimeters

Between which two days in a row did the GREATEST change in height occur?

Day _____ and Day _____

How much did the grass grow between Day 3 and Day 6?

Answer _____ centimeters

Key Elements:

- 8 centimeters

AND

- Day 7 and Day 8

AND

- 5 centimeters

Rubric:

2 points	Three key elements
1 point	One or two key elements
0 points	Other

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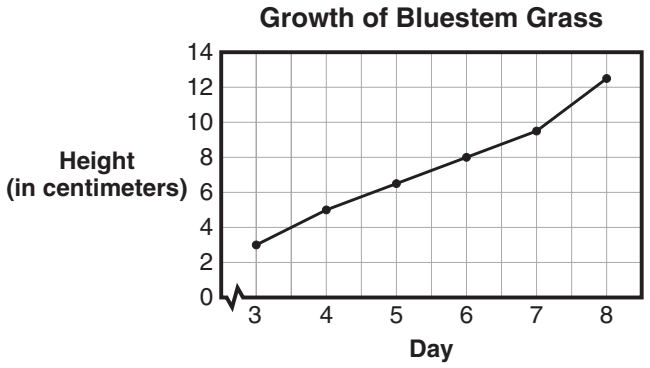
SCORE POINT 2

3 The graph below shows the growth of bluestem grass.



How tall was the grass on Day 6?

Answer 8 centimeters

Between which two days in a row did the GREATEST change in height occur?

Day 7 and Day 8

How much did the grass grow between Day 3 and Day 6?

Answer 5 centimeters

Test 11—Question 3
Score Point 2

This response correctly gives the height of the grass on Day 6, correctly identifies the two days in a row when the greatest change in height occurred, and correctly determines how much the grass grew between Day 3 and Day 6. The response receives a Score Point 2.

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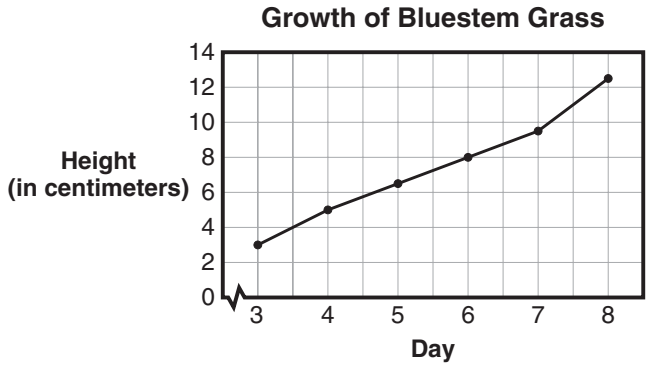
Test 11—Question 3
Score Point 1

This response correctly gives the height of the grass on Day 6 and correctly identifies the two days in a row when the greatest change in height occurred. However, the student incorrectly determines how much the grass grew between Day 3 and Day 6. Therefore, this response receives a Score Point 1.

SCORE POINT 1

3 The graph below shows the growth of bluestem grass.



How tall was the grass on Day 6?

Answer 8 centimeters

Between which two days in a row did the GREATEST change in height occur?

Day 7 and Day 8

How much did the grass grow between Day 3 and Day 6?

Answer 4 centimeters

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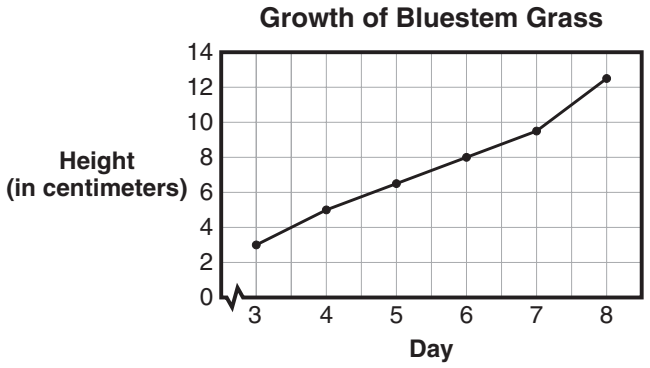
SCORE POINT 0

3 The graph below shows the growth of bluestem grass.



How tall was the grass on Day 6?

Answer 5 centimeters

Between which two days in a row did the GREATEST change in height occur?

Day 14 and Day 12

How much did the grass grow between Day 3 and Day 6?

Answer 28 centimeters

Test 11—Question 3
Score Point 0

This response incorrectly gives the height of the grass on Day 6, incorrectly identifies the two days in a row when the greatest change in height occurred, and incorrectly determines how much the grass grew between Day 3 and Day 6. Therefore, this response receives a Score Point 0.

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4 A student measured the air temperature, in degrees Celsius (°C), in two areas of the schoolyard. The student measured the temperature in a shady area and in a sunny area several times during the day. The student's data are listed below.

- At 8:00 A.M., the temperature was 17°C in the shady area and 17°C in the sunny area.
- At 10:00 A.M., it was 21°C in the shady area and 22°C in the sunny area.
- At 12:00 P.M., it was 24°C in the shady area and 26°C in the sunny area.
- At 2:00 P.M., it was 26°C in the shady area and 28°C in the sunny area.
- At 4:00 P.M., it was 27°C in the shady area and 29°C in the sunny area.

Complete the DATA TABLE below to show the student's data.

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Key Elements:

Data table correctly describes, organizes, and displays all information:

- all columns/rows labeled appropriately, including units of measurement
- table organized/labeled so that data relationships can be determined
- all data entered correctly

Exemplary response:

Time of Day	Temperature in Shady Area (in degrees Celsius)	Temperature in Sunny Area (in degrees Celsius)
8:00 A.M.	17	17
10:00 A.M.	21	22
12:00 P.M.	24	26
2:00 P.M.	26	28
4:00 P.M.	27	29

NOTE: If labels are only partly correct/complete, then response loses 1 score point. If labels are insufficient to determine data relationships, then response receives no credit. If data entered is only partly correct/complete, then response loses 1 score point. If incorrect information is added to table, then response loses 1 score point.

Rubric:

2 points	Data table is completely correct
1 point	Data table is partly correct
0 points	Other

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Test 11—Question 4
Score Point 2

This response correctly describes, organizes, and displays all information. All columns and rows are labeled appropriately, including units of measurement. The table is organized and labeled so that data relationships can be determined. All the data are entered correctly. The response receives a Score Point 2.

SCORE POINT 2

4 A student measured the air temperature, in degrees Celsius (°C), in two areas of the schoolyard. The student measured the temperature in a shady area and in a sunny area several times during the day. The student's data are listed below.

- At 8:00 A.M., the temperature was 17°C in the shady area and 17°C in the sunny area.
- At 10:00 A.M., it was 21°C in the shady area and 22°C in the sunny area.
- At 12:00 P.M., it was 24°C in the shady area and 26°C in the sunny area.
- At 2:00 P.M., it was 26°C in the shady area and 28°C in the sunny area.
- At 4:00 P.M., it was 27°C in the shady area and 29°C in the sunny area.

Complete the DATA TABLE below to show the student's data.

Time	Temperture of shady area	Temperture of Sunny area
8:00 a.m.	17°C	17°C
10:00 A.M.	21°C	22°C
12:00 P.M.	24°C	26°C
2:00 P.M.	26°C	28°C
4:00 P.M	27°C	29°C

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SCORE POINT 1

4 A student measured the air temperature, in degrees Celsius (°C), in two areas of the schoolyard. The student measured the temperature in a shady area and in a sunny area several times during the day. The student's data are listed below.

- At 8:00 A.M., the temperature was 17°C in the shady area and 17°C in the sunny area.
- At 10:00 A.M., it was 21°C in the shady area and 22°C in the sunny area.
- At 12:00 P.M., it was 24°C in the shady area and 26°C in the sunny area.
- At 2:00 P.M., it was 26°C in the shady area and 28°C in the sunny area.
- At 4:00 P.M., it was 27°C in the shady area and 29°C in the sunny area.

Complete the DATA TABLE below to show the student's data.

Time	shady degrees celcius	degrees celcius sunny
8:00 Am	17°c Shady	Sunny 17°c
10:00 Am	21°c Shady	22°c Sunny
12:00 PM	24°c Shady	26°c Sunny
4:00 PM	27°c Shady	29°c Sunny

Test 11—Question 4
Score Point 1

This response correctly describes, organizes, and displays most of the information. All columns and rows are labeled appropriately, including units of measurement. The table is organized and labeled so that data relationships can be determined. However, the information for 2:00 P.M. is missing from the table. Therefore, this response receives a Score Point 1.

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Test 11—Question 4
Score Point 0

This response correctly displays most of the information. However, the columns and rows are not labeled so that data relationships can be determined. Therefore, this response receives a Score Point 0.

SCORE POINT 0

4 A student measured the air temperature, in degrees Celsius (°C), in two areas of the schoolyard. The student measured the temperature in a shady area and in a sunny area several times during the day. The student's data are listed below.

- At 8:00 A.M., the temperature was 17°C in the shady area and 17°C in the sunny area.
- At 10:00 A.M., it was 21°C in the shady area and 22°C in the sunny area.
- At 12:00 P.M., it was 24°C in the shady area and 26°C in the sunny area.
- At 2:00 P.M., it was 26°C in the shady area and 28°C in the sunny area.
- At 4:00 P.M., it was 27°C in the shady area and 29°C in the sunny area.

Complete the DATA TABLE below to show the student's data.

DATA	temperature	Shady
8:00 AM	17°C	17°C
10:00 AM	21°C	22°C
12:00 PM	24°C	26°C
2:00 PM	26°C	28°C
4:00 PM	27°C	29°C

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Test 11—Question 5: The Nature of Science and Technology

5 Describe ONE way that cell phones can be HELPFUL to people.

_____

_____

Describe ONE way that cell phones can be HARMFUL to people.

_____

_____

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Key Elements:

Any one of the following:

- It is easier to communicate with one another when people are in hard-to-reach places.
- A cell phone can cost less than a land-line telephone.
- It is easier to reach someone during an emergency situation.
- Parents can use it as a way to keep track of their children.
- other valid way that cell phones can be helpful to people

AND

Any one of the following:

- Cell phones can distract people while they are driving (and cause accidents).
- Cell phones may have a harmful effect on the body (that has not been discovered yet).
- Cell phones can allow people to overhear private conversations.
- other valid way that cell phones can be harmful to people

Rubric:

2 points	Two key elements
1 point	One key element
0 points	Other

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SCORE POINT 2

5 Describe ONE way that cell phones can be HELPFUL to people.

If someone is in an accident they could call for help.

Describe ONE way that cell phones can be HARMFUL to people.

Some people talk while they drive and they get distracted from talking and get in a wreck.

Test 11—Question 5
Score Point 2

This response correctly identifies a way that cell phones can be helpful to people and correctly identifies a way that cell phones can be harmful to people. The response receives a Score Point 2.

SCORE POINT 1

5 Describe ONE way that cell phones can be HELPFUL to people.

If some thing bad could happen.

Describe ONE way that cell phones can be HARMFUL to people.

Could have a car wreck wiell talking on the phone.

Test 11—Question 5
Score Point 1

This response incorrectly identifies a way that cell phones can be helpful to people. However, the student correctly identifies a way that cell phones can be harmful to people. Therefore, this response receives a Score Point 1.

SCORE POINT 0

5 Describe ONE way that cell phones can be HELPFUL to people.

get in touch with other people.

Describe ONE way that cell phones can be HARMFUL to people.

somebody could call the wrong number.

Test 11—Question 5
Score Point 0

This response incorrectly identifies a way that cell phones can be helpful to people and incorrectly identifies a way that cell phones can be harmful to people. Therefore, this response receives a Score Point 0.

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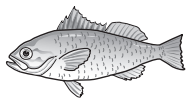
6 The animals shown below can be sorted into groups in different ways.

Squirrel



Bass

Duck

Deer

Eagle

Fox

Finch

Snake

Describe ONE physical feature that some of these animals have in common, but that the other animals shown above do NOT have.

_____

In the Group 1 section of the table below, list the names of the animals that have the feature.

In the Group 2 section of the table, list the names of the animals that do NOT have the feature.

Group 1 Have the feature	**Group 2** Do NOT have the feature

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Key Elements:

- any valid physical feature that could be used to sort all of these animals into two distinct groups

AND

- all animals are listed and correctly sorted so that the animals listed in group 1 have the feature and the animals listed in group 2 do not have the feature

Rubric:

2 points	Two key elements
1 point	One key element
0 points	Other

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Test 11—Question 6
Score Point 2

This response correctly describes one physical feature that could be used to sort the animals into two distinct groups. The student correctly lists and sorts all the animals based on the feature. The response receives a Score Point 2.

SCORE POINT 2

6 The animals shown below can be sorted into groups in different ways.


Squirrel


Bass


Duck


Deer


Eagle


Fox


Finch


Snake

Describe ONE physical feature that some of these animals have in common, but that the other animals shown above do NOT have.

fur

In the Group 1 section of the table below, list the names of the animals that have the feature.

In the Group 2 section of the table, list the names of the animals that do NOT have the feature.

Group 1 Have the feature	**Group 2** Do NOT have the feature
deer squirel fox	eagle finch duck snake bass

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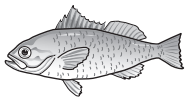
SCORE POINT 1

6 The animals shown below can be sorted into groups in different ways.


Squirrel


Bass


Duck


Deer


Eagle


Fox


Finch


Snake

Describe ONE physical feature that some of these animals have in common, but that the other animals shown above do NOT have.

Have tail,

In the Group 1 section of the table below, list the names of the animals that have the feature.

In the Group 2 section of the table, list the names of the animals that do NOT have the feature.

Group 1 Have the feature	**Group 2** Do NOT have the feature
Fox Sqcuirrel Deer	Snake Finch Eagle Duck Bass

Test 11—Question 6
Score Point 1

This response correctly describes one physical feature that could be used to sort the animals into two distinct groups. However, the student did not sort the animals correctly based on the feature. Therefore, this response receives a Score Point 1.

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Test 11—Question 6
Score Point 0

This response does not describe a physical feature (laying eggs, if that is what the student means here, is a way of giving birth to offspring but is not a physical feature of any animal). Therefore, the response cannot receive credit for sorting the animals based on a physical feature. Therefore, this response receives a Score Point 0.

SCORE POINT 0

6 The animals shown below can be sorted into groups in different ways.


Squirrel


Bass


Duck


Deer


Eagle


Fox


Finch


Snake

Describe ONE physical feature that some of these animals have in common, but that the other animals shown above do NOT have.

Lay eggs

In the Group 1 section of the table below, list the names of the animals that have the feature.

In the Group 2 section of the table, list the names of the animals that do NOT have the feature.

Group 1 Have the feature	**Group 2** Do NOT have the feature
eagle bass snack duck finch	Squirrel deer fox

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Test 11—Question 7: The Living Environment

7 People wash their hands in order to clean them. People also wash their hands in order to prevent getting some diseases.

Explain how washing hands can prevent people from getting some diseases, such as colds.

_____

_____

_____

Give ONE other example of something people can do to help prevent the spread of these diseases.

_____

_____

_____

Key Elements:

- Cleaning hands with soap and water can help kill/remove the germs (e.g., bacteria, viruses, etc.) that can cause certain (infectious) diseases.

AND

Any one of the following:

- cover mouth while coughing/sneezing
- get a vaccination/flu shot
- stay away from people who have these diseases
- do not drink/eat from the same glass/plate as people who have these diseases
- other valid method to prevent spreading diseases that are caused by germs

Rubric:

2 points	Two key elements
1 point	One key element
0 points	Other

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Test 11—Question 7
Score Point 2

This response correctly explains how washing hands can prevent people from getting diseases caused by germs and correctly gives an example of another activity that people can do to help prevent spreading these diseases. The response receives a Score Point 2.

SCORE POINT 2

7 People wash their hands in order to clean them. People also wash their hands in order to prevent getting some diseases.

Explain how washing hands can prevent people from getting some diseases, such as colds.

Washing your hands destroys a lot of the germs that cause disease.

Give ONE other example of something people can do to help prevent the spread of these diseases.

You sneeze into a tissue instead of your arms or hands.

Test 11—Question 7
Score Point 1

This response incorrectly explains how washing hands can prevent people from getting diseases caused by germs. (Instead, the student describes a situation where a person would need to wash hands to prevent the spread of diseases caused by germs.) However, the student correctly gives an example of another activity that people can do to help prevent spreading these diseases. Therefore, this response receives a Score Point 1.

SCORE POINT 1

7 People wash their hands in order to clean them. People also wash their hands in order to prevent getting some diseases.

Explain how washing hands can prevent people from getting some diseases, such as colds.

If you sneeze of couff in your hands if you don't wash then it will spread diseases

Give ONE other example of something people can do to help prevent the spread of these diseases.

They could cover there mouth.

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SCORE POINT 0

7 People wash their hands in order to clean them. People also wash their hands in order to prevent getting some diseases.

Explain how washing hands can prevent people from getting some diseases, such as colds.

People wash thier hands so they don't have a cold.

Give ONE other example of something people can do to help prevent the spread of these diseases.

Kids take medichine from getting a cold.

Test 11—Question 7
Score Point 0

This response incorrectly explains how washing hands can prevent people from getting diseases caused by germs and gives an incorrect example of another activity that people can do to help prevent spreading these diseases. Therefore, this response receives a Score Point 0.

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Test 11—Question 8: The Physical Setting

8 Soil is a mixture of different things. One of the main materials that makes up soil is small pieces of weathered rocks and minerals.

Describe ONE other material that makes up soil.

_____

Besides human activities, describe ONE weathering process that breaks rocks apart.

_____

_____

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Key Elements:

Any one of the following:

- dead/decaying organic material
- water
- living organisms (e.g., bacteria, insects, plants, etc.)

AND

Any one of the following:

- dissolving in water
- acid rain dissolving minerals
- chemicals dissolved in water reacting/combining with minerals
- oxygen/gases reacting/combining with minerals
- abrasion as a result of erosion by wind/moving water/glacial ice
- frost/ice wedging
- salt crystallizing in cracks
- tree roots growing into cracks
- other valid processes that can cause larger rocks to weather and break apart into smaller rocks

NOTE: The response "erosion" will only be acceptable if the response also explains how erosion can cause weathering of rocks.

Rubric:

2 points	Two key elements
1 point	One key element
0 points	Other

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Test 11—Question 8
Score Point 2

This response correctly describes another material that makes up soil and correctly describes a weathering process that breaks rocks apart. The response receives a Score Point 2.

SCORE POINT 2

8 Soil is a mixture of different things. One of the main materials that makes up soil is small pieces of weathered rocks and minerals.

Describe ONE other material that makes up soil.

One other one is plant leaves.

Besides human activities, describe ONE weathering process that breaks rocks apart.

Water gets into the rock, then, in the winter, the water freezes and breaks the rock apart.

Test 11—Question 8
Score Point 1

This response incorrectly describes another material that makes up soil. However, the student correctly describes a weathering process that breaks rocks apart. Therefore, this response receives a Score Point 1.

SCORE POINT 1

8 Soil is a mixture of different things. One of the main materials that makes up soil is small pieces of weathered rocks and minerals.

Describe ONE other material that makes up soil.

Dirt also makes soil.

Besides human activities, describe ONE weathering process that breaks rocks apart.

Rocks in a stream with a current flowing along the bottom hard and breaking each other.

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SCORE POINT 0

8 Soil is a mixture of different things. One of the main materials that makes up soil is small pieces of weathered rocks and minerals.

Describe ONE other material that makes up soil.

dirt,

Besides human activities, describe ONE weathering process that breaks rocks apart.

wether,

Test 11—Question 8
Score Point 0

This response incorrectly describes another material that makes up soil and incorrectly describes a weathering process that breaks rocks apart. Therefore, this response receives a Score Point 0.

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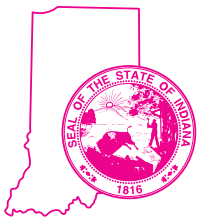

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